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**(54) OPTICAL SILICA GLASS MEMBER FOR F2
 EXCIMER LASER TRANSMISSION AND METHOD
 FOR PRODUCING THE SAME**

(57) Abstract:

PROBLEM TO BE SOLVED: To obtain the subject silica glass member which comprehensively satisfies optical properties including light transmittance, laserproofness, birefringence and homogeneity,

SOLUTION: This optical silica glass member for F2 excimer laser transmission is obtained by the following steps: a silicon-contg. compound is subjected to flame hydrolysis in a vapor phase to

produce silica microparticles, which are accumulated on a heat-resistant substrate to make a porous preform; the preform is then vitrified to clearness into a transparent vitreous form, from which the objective optical silica glass member is produced; wherein, after forming the porous preform and prior to clearly vitrifying it, the porous preform is subjected to OH group-diminishing treatment, oxygen deficiency removal treatment and fluorine doping treatment to bring the fluorine concentration and OH group concentration of the resultant porous preform to 0.1-2.0 mol and ≤ 5 ppm, respectively.

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